5 35 Glenwood Hills Parkway, SE, Post Office Box 874, Grand Rapids, Michigan 49588-0874

July 2, 1997

Mr. John Seymour, P.E.
Project Coordinator
Woodward-Clyde Consultants
38777 West Six Mile Road
Suite 200
Livonia, Michigan 48152

RE: Albion-Sheridan Township Landfill Gas Monitoring

Dear Mr. Seymour:

Telephone
616.942.9600
Facsimile
616.942.6499

Pursuant to our conversation on June 27, 1997, I have reviewed the ROD and associated Statement of Work in light of our comments provided on the 95% Design Document. Although, you requested that I not correspond in writing, I am doing so to avoid any misinterpretation. In addition, Jon Peterson requested that I document any contacts in writing.

From my perspective, the comments pertaining to landfill gas monitoring in the 95% Design were not "new", nor were they inflammatory. Since the 30% Design omitted any landfill gas monitoring altogether, this is the first opportunity that we have had to provide specific comments on the proposed monitoring. There were many general comments provided in the 30% Design regarding landfill gas monitoring (EPA comments 7, 24, 42, 44, 59, 62, and 63). The RD Work Plan, prepared by Woodward-Clyde Consultants (June 1996), discusses the gas emissions study on Page 3-3. Within this discussion, the work plan references compliance with ARARs, specifically NREPA 451, Parts 115 and 55. I have attached a copy of Rule 433 promulgated under PA 451, Part 115. This rule describes the landfill gas monitoring required by this Act.

Since there appears to be a difference of interpretation with regard to the requirements of the ROD and associated SOW, I would like to recommend that we wait until Jon Peterson returns on July 7, 1997 for further discussions.

Sincerely yours,

Earth Tech, Inc.

Elizabeth U. Bartz

Elizabeth U. Bartz
Site Project Manager

CC: Pat Vogtman, U.S. EPA Project Officer
Jon Peterson, U.S. EPA Remedial Project Officer
File 19740

eb\ELIB i:\AROS\19740.04\ARAR.doc

Title: MI / Department of Environmental Quality - Waste Management Division - Solid Waste Management - Part 4 - R 299.4433

Section: R 299.4433 Type II Landfill Operation; Explosive Gas Control and Monitoring

Date: September 22, 1993

Subject Terms: waste | solid waste | municipal waste | landfill | solid waste facility | operating | monitoring | compliance

R 299.4433 Type II landfill operation; explosive gas control and monitoring.

Rule 433. (1) The owner and operator of a type II landfill shall ensure all of the following:

(a) That the concentration of methane gas generated by the facility is not more than 25% of the lower explosive limit for methane in facility structures, excluding gas control or recovery system components, and the leachate collection system.

(b) That the concentration of methane gas is not more than the lower explosive limit at or beyond the facility property boundary.

(c) That gases generated by the facility do not create a nuisance and are not otherwise in violation of the provisions of act 348 at the property boundary.

(2) The owner and operator of a type II landfill shall implement a routine methane monitoring program to ensure that the requirements of subrule (1) of this rule are met. The type and frequency of monitoring shall be based on all of the following factors:

(a) Soil conditions.

(b) The hydrogeologic conditions surrounding the facility.

(c) The hydraulic conditions surrounding the facility.

(d) The location of facility structures and property boundaries.

(3) The minimum frequency of methane monitoring shall be quarterly.

(4) If methane gas levels exceeding the limits specified in subrule (1) of this rule are detected from either an active or closed unit, the owner and operator shall do all of the following:

(a) Immediately take all necessary steps to ensure protection of human health and notify the director.

(b) Within 7 days of detection, place, in the operating record, the methane gas levels detected and a description of the steps taken to protect human health.

(c) Within 60 days of detection, implement a remediation plan for the methane gas and the proposed remedy.

(5) The director may establish alternative schedules for demonstrating compliance pursuant to the provisions of subrule (4) of this rule.

(6) An active gas management system shall be installed at a type II landfill if necessary pursuant to the provisions of subrule (4) of this rule. An active gas management system shall do all of the following:

(a) Include a control system that includes 1 or both of the following:

(i) A system within the unit that is in compliance with the provisions of subrule (8) of this rule.

(ii) A system outside the unit that is in compliance with the provisions of subrule (9) of this rule.

(b) Include a collection system for transporting gas to a central point or points for process or disposal.

(c) Include provisions for collecting and draining gas condensate to the leachate collection and removal system.

(d) Prevent the migration of gas out of the unit.

(e) Operate until the waste is stabilized and no longer producing gas in quantities that are in violation

of the provisions of subrule (1) or (4) of this rule.

(7) An active gas control system that is installed within the perimeter of a solid waste disposal unit shall be designed and constructed to do the all of the following:

(a) Function for the active life of the disposal unit and the post-closure period.

(b) Operate safely in hazardous or explosive environments.

(c) Be resistant to corrosion by the constituents of landfill gas.

(d) Withstand all normal landfill conditions, including settlement

(e) Provide for the collection and draining of gas condensate.

(f) Not adversely affect the integrity of any liner, leachate collection system, or final cover.

(g) Be airtight.

(8) An active gas control system that is located outside the perimeter of the solid waste disposal unit shall consist of either trenches or gas wells which effectively cut off the lateral migration of gas and which extend down to 1 of the following:

(a) A natural soil barrier that is in compliance with the provisions of R 299.4912.

(b) The seasonal high water table.

(c) The elevation of the liner within the solid waste disposal unit.

(d) Other barriers approved by the director.

History: 1993 MR 9, Filed September 22, 1993, Eff. 15 days after filing.